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No. 1465/V—237 OF 1896.

DEPARTMENT OF LAND RECORDS AND AGRICULTURE, NORTH-WESTERN PROVINCES AND OUDH.

FROM

D. C. BAILLIE, ESQ.,

DIRECTOR OF LAND RECORDS AND AGRICULTURE,

NORTH-WESTERN PROVINCES AND OUDH,

TO

THE CHIEF SECRETARY TO GOVERNMENT,

NORTH-WESTERN PROVINCES AND OUDH.

Dated Lucknow, the 15th June 1896.

SIR,

I HAVE the honor to forward herewith the Annual Report on the Lucknow Horticultural Gardens for the year 1895-96.

2. The past year has been characterized by the brief duration of the rains and the lengthened period of extreme drought which followed their cessation. The year was, therefore, an unfavourable one for horticulture, and particularly unfavourable for ornamental gardening and fruit-growing. The difficulties of the garden management have been added to by the fact that the floods of the preceding year had destroyed a large proportion of the young plants raised for sale and seriously reduced the number of full-grown fruit trees.

3. Mr. Ridley has, notwithstanding, shown a good record of work done, and maintained the garden income to an extent which does his management much credit. The total income and expenditure since 1890-91 are compared in the following statement:—

	1890-91.	1891-92.	1892-93.	1893-94.	1894-95.	1895-96.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Expenditure	15,000	15,000	15,300	15,500	15,800	15,858
Cash income	12,147	12,046	13,313	13,271	13,050	12,898
Deficit	2,853	2,954	1,987	2,229	2,750	2,960

Rs. 538 worth of plants and trees were last year issued free of charge, so that the actual deficit on the year's work was only Rs. 2,422. In view of the high standard which has in Lucknow to be maintained in the appearance of the gardens, this deficit is a remarkably small one. It would, without doubt, have been considerably smaller had not the losses of 1894 greatly reduced the stock of young plants available for sale.

4. As regards the fruit harvest, the year now reported on has been the whole an inferior one. The mango, orange and lime crops were [illegible], and the crop of jack-fruit the lightest the Superintendent remembers [illegible]e seen. The loss so experienced has been but partially recovered [illegible] good yield of pineapples, leeches and peaches.

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5. In regard to the experimental cultivation of fruit trees, few final results can be communicated this year. The proved value of the *álu-bukhárá* is leading to an extension of the area on which it is grown in the Garden. The imported Malta oranges all fruited during the year. The variety *dulcissimo* fruited freely; other varieties gave a light crop. In general, the flavour of the fruit was excellent. Mr. Ridley considers the "egg-fruit" variety the best in appearance and flavour. China bitter oranges and California loquats appear unsuited to the North-Western Provinces. The former are of good appearance and juicy, but too bitter to be of value in a country where the demand for fruit for preserves is limited. California loquats, as grown in Lucknow, are greatly inferior to the indigenous variety.

6. In the distribution of fruit-trees—certainly one of the most important functions of the Garden—a considerable advance was made this year, 353 plants having been sent out more than last year, and this in spite of the fact that the distribution of certain varieties was curtailed by the loss of young plants in the 1894 flood. The arboricultural nursery was similarly injured in 1894, but the supply available for future years is now full. It appears a matter for regret that Boards of districts bordering on Lucknow do not make greater use of the Lucknow nursery, which can supply imported trees of recognised value, such as mahogany, which are not available in the local nurseries. I am asking the Superintendent for a list of such trees for circulation to District Boards.

7. Regarding vegetable cultivation, there is little to be noted except the superiority, as an early vegetable, of Sutton's earliest cabbage. The demand for vegetable seeds imported and acclimatised was less than in the previous year, and the loss was but partially met by an increase in the value of vegetables sold. The area available for the growth of annuals and vegetables has been considerably extended, and an improvement in the income may be hoped for next year.

8. Experiments on fodder crops have, so far as they have given definite results, been failures. The Japanese *Polygonum saghalinense* and English clover have both shown themselves unsuited to the climate. A variety of *Rumex* "*canaigre*" appears to be more likely to be suited for cultivation in these Provinces. Seed is available for distribution for experimental purposes, and will be sent to other parts of the province for trial.

9. The history of the exotic plantation for the past year has been dull. The Divi-Divi plantation had better be reduced to the shaded area. It would be better to start a fresh plot elsewhere than to plant shade trees to protect Divi-Divi already well grown. There appears to be no reason, however, for maintaining an area of this plant in the garden, as the part which is flourishing will give seed enough for distribution. The full area originally allotted to the Eucalyptus plantation has now been occupied, and the trees in general look well. The dates are injured by the Eucalyptus shade but even where they are grown in the open, we have had no reason to expect that date fruit can be successfully grown at Lucknow. The form fruit freely; but the rains come on before it is ripe, and it ha

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ound impossible to so protect the masses of fruit as to prevent the damp rom rotting through the fruit stalk.

10. The working of the scheme for training gardeners, native and Eurasian, has been for some years, in the Superintendent's opinion, not ntirely satisfactory. His opinion will now be asked as to how it can be mproved. The demand for trained gardeners is large, and the pay offered by many employers high. There appears to be no reason why apprentices of the right type should not be obtained. It appears to me of the greatest importance that it should be recognised that apprentices are temporarily employed, and that after the expiry of a given period they should be discharged if not transferred to the regular garden staff. The unsatisfactory European apprentice employed in 1892 has now surely had training enough to make him a gardener if he means to be one. I propose to ask Mr. Ridley to fix a period of apprenticeship to be passed through, and after the expiry of the period to discharge apprentices, whether they have found employment to their liking or not. It is in this way only that the staff of trained gardeners available can be increased to the fullest possible extent. There does not appear to be the least reason to doubt that the apprentices can find suitable employment. With a post in the garden to fall back on they are at present very hard to please, and very few will consent to serve outside Lucknow.

11. I would, in conclusion, express my entire agreement in the remarks made year after year as to the value and efficiency of Mr. Ridley's management. Lately a District Officer in the neighbourhood of Lucknow, I have had frequent opportunities of seeing how much native gentlemen of Oudh, interested in horticulture, owe to the Lucknow Gardens.

I have the honor to be,

SIR,

Your most obedient servant,

D. C. BAILLIE,

Director.

REPORT on the Government Horticultural Gardens, Lucknow, for the year ending 31st March 1896.

I.—Fruit Culture.

The mango crop was again a light one, but pineapples, which grow below the mango trees, yielded well. Peaches and *alubukharas* gave good crops; also loquats and lichis. The crop of the jack-fruits was the worst I have known.

2. The orange and lime crops were light: in fact all the citron tribe yielded poor crops. One exception was a seedling orange tree of the Malta type; this bore a very fair crop of fruit, which, both in size and quality, was equal to any of the named kinds in the Garden.

A.—Improvement of indigenous or acclimatized kinds.

3. A small plot has been planted with forty plants of the garden variety of alubukhara, which, so far, is decidedly superior to any other variety yet tried. I hope to extend the area of this very useful fruit.

Alubukhara *(Prunus bokariensis).*

4. On a small plot of ground which was found available, 55 seedling peach trees were planted: these seedlings are from the seeds of selected fruit. Owing to injury from the flood in 1894, nearly all the seedling trees of this class which were under observation have died—several this year.

Seedling peach trees.

5. There is nothing requiring special record in connection with the Arabian date palms.

Arabian date-palms *(Phœnix dactylifera).*

B.—Introduction of new kinds.

6. Nearly all the orange trees imported in 1887 fruited this year; with the exception of the kind named *dulcissimo*, all yielded slightly. They were closely observed, and, when ripe, a careful comparison of the several kinds was made with each other and also with the old kinds in the Garden of the same type.

Imported oranges.

7. The following are the notes recorded:—

Dulcissimo.—Fruits varied greatly in size, some large, some small; skin a little thicker than *Embiguo;* flavor superior, rich and sweet; an excellent orange.

Dulcis.—Slightly smaller than a common Malta; skin thinner; flavour slightly more acid.

Embiguo or *Marvel.*—Fruit the size of an ordinary Malta; skin medium in thickness; flavour fair.

Excelsior.—Fruit somewhat smaller than the common Malta; slightly oblong, skin thinner than Malta; flesh orange yellow with a slightly acid flavour.

Egg.—Fruits variable in size, large and small; skin rather smooth and thin. Fruits have a good appearance and are also of fine flavour. This is the best orange, so far, of this batch.

Long orange.—Very like a common Malta, both in size and appearance, thickness of skin, flavour, &c.

St. Michael's.—A good-sized fruit, a little over the common Malta in size; has a thinner skin, excellent flavor: a good orange.

Silver.—Rather a small fruit: skin a pale orange colour: hence probably the name "silver." Skin thin, flesh juicy; of moderate flavour.

8. A plant of the China bitter orange bore several fruits; they were most taking to look at, being large and well-formed. When ripe they were highly charged with juice, but too bitter in flavour to be at all palatable.

China bitter orange.

9. A Japan orange, named *sz-in-kom*, also fruited. It seems to be nothing else than what has been long in the Garden under the name of the Mandarin orange.

10. Ten of the strongest plants of the Malta loquats were planted out, and are, so far, doing well.

Malta loquats *(Eriobotrya japonica).*

California loquats.

11. A few years ago a packet of loquat seeds was received from California; the trees raised from this seed fruited this year. I regret to say the fruit proved to be very small and very much inferior to varieties long grown in the garden.

The Mauritius Ber (*yzyphus jujuba*)("*Mas- var.*").

12. The plants of the Mauritius Ber have not made much progress, and are still being grown in pots; so many as room can be spared for will be planted out in the coming year.

Mangoes (*Mangifera lica var.*).

13. Plants were received of the following new kinds of mangoes from the Government Agri-Horticultural Garden, Lahore:—

1. Mango Erinnura. 2. Mango Alphonsa.

3. Mango Khusi.

mported strawberries.

14. There is still hope of establishing the strawberries imported in 1894, as plants of all are still existing in Mr. Reid's garden at Naini Tal, and also in the Muktesar Nursery, Naini Tal.

15. At Naini Tal they have not done well owing to having been planted in poor shaley soil; in a suitable soil they would no doubt do well enough. At Muktesar some fruit was obtained and efforts are now being made to increase the stock of plants.

C.—Distribution.

16. The following statement gives the details of distribution of fruit-trees for the year:—

Name.	Sold.	Distributed gratis.	Total.
Oranges	487		487
Mangoes	786		786
Malta lemons	139		139
Kágzi limes	140		140
Sweet and sour limes and citrons	89		89
Loquats	85		85
Vines	35	9	44
Lichis	58		58
Peaches	30		30
Pineapples	21		21
Plantains	77		77
Pummelows	37		37
Plums and Aluchas	13		13
Jack-fruit	9		9
Papitas	47		47
Rose-apples	9		9
Wampee	8		8
Guavas	36		36
Custard apples	73	2	75
Kamrakhs	14		14
Figs	36		36
Pears	56		56
Pomegranates	15		15
Khirni	9		9
Achras supota	2		2
Brazil cherry	2		2
Ber	1	6	7
Panyala	1		1
Total	2,315	17	2,332

17. There is an increase in the number of fruit-trees sent out of 353 against last year's issue. The chief increase occurs in the number of grafted mango trees sent out. This year's issue of both grafted mango plants and oranges would have been still greater had plants been on hand: this deficiency is due to loss of stocks caused by the flood in 1894. Owing to want of stocks for grafting and budding, only a limited number of plants could be prepared for sending out. Stocks have now been raised and are estimated to be ample for all requirements during the coming year.

With 18. the increase in the issue the receipts from this source are in excess of last year by Rs. 303-9-0, the total for this year being Rs. 976-2-0.

19. The value of the fruit-trees supplied gratis is Rs. 4-4-0, which, added to the above, makes the total value of the year's distribution for fruit-trees Rs. 980-6-0.

II.—Vegetable and Farm Culture.

Country vegetables.

20. The usual selection of country vegetables was grown for the purpose of yielding seed.

21. The hot-weather section did well, with the exception of "kakri" (*cucumis melo var utilissimus*), the fruits of which suffered severely from disease, which attacked and destroyed them when at a mature stage of growth.

Imported vegetables.

22. Imported vegetables were also grown as in preceding years: peas did moderately well only; the excessively dry atmosphere which prevailed all through the cold weather was most unfavourable to this crop. Carrots were to a large extent a failure, owing to the seed germinating badly. With these exceptions, the results obtained with other vegetables were satisfactory.

An early cabbage.

23. As early vegetables are usually in request by the general public, it may be stated that Sutton's earliest cabbage proved itself the earliest out of the undermentioned kinds by fully two weeks: all were sown at the same time and received identical treatment afterwards:—

Cabbage, Sutton's Imperial.	Cabbage, Sutton's All Heart.
„ Wheeler's Imperial.	„ Sutton's Earliest.

Egyptian onion.

24. Through the kind offices of Dr. Bonavia, I received a large packet of onion seed from Egypt, but I am sorry to say none of it germinated. In forwarding the seed Dr. Bonavia expressed the opinion that it was probably the same variety (silver-skin) which has been so long cultivated in this Garden. It is matter for regret that this could not be ascertained.

Sugarcane (*Saccharum officinarum*) *var.*

25. The non-success of previous years has again been repeated this, in the attempt made to raise sugarcane from seed. The repeated sowings made all ended in blank failures. The plantation made in 1893 having exhausted the soil and got into an unsatisfactory condition, a new one has been made of the same kinds.

Fodder plant (*Polygonum sachalinense*).

26. The Japanese fodder plant, *Polygonum sachalinense*, has so far proved a failure, the plants got sickly in the rains and died down to the ground before the cold weather set in: growth commenced again in February, and the plants have a few weakly stems upon them now. The appearance of the plants afford no ground for thinking that this plant will be of any use as a forage-producer in a climate like Lucknow.

Rum plant (*Strobilanthes flaccidifolius*).

27. Two consignments of Rum plant (*Strobilanthes flaccidifolius*) were received from the Assistant Director; the plants in the first consignment all died, but from the second lot eleven are alive: nine plants in the ground under lichi trees, and the other two in pots. They are only a few inches high and not vigorous, but appear healthy and afford some hope of succeeding.

Spanish or Italian gram (*Cicer arietinum*) *vars.*

28. Sufficient seed has been secured of the Italian grams mentioned in last year's report at paragraph 42 to admit of a sowing being made of each on a scale large enough to afford a fair test of the outturns they are capable of yielding. This I hope to carry out next year.

Canaigre (*Rumex hymenocephalus*).

29. The plants, or rather roots, raised last year of "canaigre" survived the hot weather and rains underground, and started into vigorous leaf growth as soon as the cold weather arrived. They were much stronger and more robust than last year, and again have seeded freely.

30 From the seed secured last year a number of young plants were raised and planted out on a plot measuring 63 square yards; this contains 259 plants: they have done well and give promise of a good yield of roots: it has been considered advisable to let them have a second year's growth before testing the yield.

31. Anyone wishing to experiment with this plant can be supplied with seed for the purpose. So far as the trial with it here has extended, there is good ground for thinking that it can be successfully grown in this climate.

Clover seed.

32. The clover seed sent by the Assistant Director was sown in the horticultural garden on good, well-cultivated soil. The seed was sound and germinated satisfactorily, but proved to be largely mixed with "kasni" (*Cichorium intybus*), the proportion of clover plants in the crop appeared to be about one-fourth of the whole.

33. Both plants reached full growth early in April, when the entire crop was cut; it was weighed at once while green. The total weight was 7¼ maunds, or at the rate of 95¼ maunds per acre.

34. Comparing this with lucerne, which is said to yield 3¾ tons or 8,400lbs. per acre at one cutting, the yield of this clover and "kasni" crop is less by 589½lbs. per acre. The season was not very favourable; but, after making due allowance on that account, it may still be safely assumed that lucerne would give a higher yield, and I should certainly think lucerne vastly superior in nutritive qualities.

35. There is nothing in this experiment to justify the belief that such a crop can be usefully grown for fodder in this part of India.

36. A plot of ground partly vacant and partly planted with Eucalyptus trees has been cleared, levelled, and made available for cold weather crops: this will give some relief, as often difficulty was experienced in finding space for crops of annuals and vegetables. The area made available is 3,133 square yards.

C.—Distribution.

37. The demand for acclimatized vegetable seeds was greater than last year. Details of distribution are as follows:—

	lbs.	ozs.
Cauliflower, early	7	7
Ditto, late	4	15
Onion	11	2
Tomato	4	7
Lettuce	6	7
Spinach	1	8
Mustard and cress	5	15
Peas and beans	80	2
Indian-corn	28	10
Cape gooseberry	2	1
Beet and turnips	2	10
Artichoke, globe	0	4
Total ...	155	8

38. The amount realized by sale of the above and 309 packets of country vegetable seeds amounted to Rs. 504-1-0 against Rs. 447-3-3 realized for the same produce last year.

39. There was a slight falling off in the demand for imported vegetable seeds compared with last year. The amount realized this year is Rs. 1,692-2-0 against Rs. 1,766-7-0 in 1895.

40. The decrease is due to there having been less demand for the collections, a supply of which are yearly procured from Messrs. Landreth and Sons.

III.—Flower Culture.

Flowering annuals.

41. The usual arrangements for keeping up a supply of seeds of a large number of flowering annuals were carried out and the results have been satisfactory in spite of an abnormally dry season.

Hippeastrums.

42. The hybrid Hippeastrums have made a poor display this year, which I attribute to the excessively dry weather before and at the flowering period. The plants in the ground have done worse than those in pots, and no new varieties have flowered, so that no additions have been made to the collection.

43. The shrub and tree nursery is now on a new site, and I trust safe from floods. The young stocks of shrubs and trees planted out and raised in it have done very well, and there is now available for distribution good numbers of such kinds as are mostly in request, with smaller supplies of nearly all kinds in the garden collection. Nursery of shrubs ar trees.

44. The rose nursery has been restocked, and a good supply of young plants are available for issue in the coming year. Rose nursery.

45. Necessary repairs have been made to the several plant-houses, and the stocks of plants grown in them have been in many instances largely increased. Plant-houses.

46. The collection of palms is now a large one, and comprises many choice kinds; of many kinds large stocks of young plants are on hand for distribution.

47. For the most part the demand in the case of palms is for good-sized plants, and as most are slow-growing, it is not always possible to meet indents.

48. The Garden has now a very good collection of caladiums; many of them choice varieties. They are very ornamental, and, being of easy culture, are in request by the public. Caladiums.

C.—Distribution.

49. There was a less demand for both acclimatized and imported flower seeds this year. The amount realized by sale of acclimatized flower seeds amounted to Rs. 961-10-0 against Rs. 1,157-14-0 last year, and the figures for imported flower seeds are Rs. 75 this year against Rs. 106-10-0 last year. Acclimatized flow seeds.

50. In Appendix II details are given of the year's distribution of ornamental trees, shrubs, bulbs, &c. The total number issued to the general public is greater than last year by nearly 7,000; but this increase is entirely due to the greater number of strawberry plants sent out this year; so that for all other plants the two years are almost equal as to numbers.

51. In the issue of seeds there is a considerable falling off this year, both in the number of packets and total weight. No reason can be assigned for this other than that the public demand was not so great as it was last year.

52. The approximate value of the plants, cuttings, bulbs, cut flowers, &c., issued free of charge, amounts to Rs. 533-7-0; this added to the value of the fruit-trees sent out free of charge raises the total amount of the year's free distribution to Rs. 537-11-0.

IV.—Arboriculture.

53. The demand for Eucalyptus leaves was nearly the same as last year. Forty-seven maunds of leaves were sent out during the year against 37 maunds last year. Supply of Eucalypt leaves.

54. The effects of the flood of September 1894 are gradually disappearing: and as no damage was done by flood-water this year, the young stocks of trees have had nothing to impede their growth. Arboricultural nurser

55. As shown in column 4 of the following statement, distribution during th year was very small: this is due to the want of trees of a size large enough to plant ou not being available, owing to the destruction of all trees of a useful size by the floo of 1894. This year trees of several kinds are available, so that I anticipate a large issue during the coming year.

56. The trees enumerated as missing in column 5 were chiefly overgrown tree which had become too large to transplant, so were uprooted to clear the space they occupied.

57. Attention is given to raise only such number of each kind as are likely to be required each year: on this account, the increase for the year is not so large as i might easily have been. As nearly as can be estimated, there will be (barring loss by flood) sufficient for all demands in the future.

58. The total number of trees in stock at the end of the year is more than doubl what it was at the end of last year.

59. The ground unoccupied by nursery was cropped with oats: the grain-yield was fairly good, but the straw was short, due to the excessively dry atmosphere which prevailed all through the growing period.

60. The following statement gives in detail the kinds of trees grown and the number of each raised, lost and sent out during the year:—

Name of trees.	Total in nursery on 31st March 1895.	Raised during the year.	Total.	Distributed during 1895-96.	Missing.	Total in nursery on 31st March 1896.
	1	2	3	4	5	6
Amb	...	3,000	3,000	...	...	3,000
Ambili	325	208	533	57	...	476
Mahua	...	40	40	...	...	40
Gular	363	150	513	9	164	340
Gabh	...	30	30	...	...	30
Jaman	653	200	853	9	144	700
Pakar	15	120	135	...	5	130
Pipal	8	162	170	20	...	150
Bargad	...	60	60	...	...	60
Bel	100	70	170	...	25	145
Shahtut	348	...	348	...	48	300
Shisham	56	130	186	...	31	155
Momseri	130	80	210	...	30	180
Kath Jaman	350	20	370	7	43	320
Chilwal	...	70	70	...	...	70
Bignonia	...	70	70	...	...	70
Sirsa	213	...	213	...	153	60
Barhal	...	80	80	...	...	80
Bauhinia	13	100	113	...	13	100
Babul	50	2	52	...	...	52
Bijaisar	16	80	96	1	15	80
Macluria	43	...	43	...	13	30
Nim	...	50	50	...	...	50
Ficus retusa	259	...	259	52	2	205
Kemkohar	18	...	18	...	...	18
Mahogany	...	230	230	...	...	230
Gareinia	...	10	10	...	...	10
Kanji	82	...	82	...	52	30
Khirni	34	16	50	...	...	50
Kaitha	68	...	68	...	18	50
Divi-Divi	10	200	210	...	10	200
Rain tree	110	50	160	...	10	150
Amaltás	...	75	75	...	...	75
Total	3,264	5,303	8,567	155	776	7,636

61. The grant for maintenance for the year was Rs. 938, and the expenditure reached Rs. 902-2-9, leaving a saving of Rs. 35-13-3.

62. Receipts amounted to Rs. 264, which amount was duly paid in to the President of the District Board.

Exotic Plantation.

63. The following additions have been made to the trees previously under trial in the Exotic Plantation: *Tecoma serratifolia*, four trees; *Manihot glaziovii*, six trees.

64. The blanks caused by the flood among those previously planted have all been filled up except in the case of *Aleurites molluccana*, of which no plants are yet available.

vi-Divi
salpinia coriaria).

65. The plantation of Divi-Divi remains very much in the condition it was last year. One of two things should be done: either to reduce the plot to the three good rows on the west side where the trees are doing well under the shade of the rain trees, or to plant some quick-growing tree among the others to afford them shade. It is quite clear that they thrive best with a certain amount of shade and shelter from tall trees.

ain tree
hecolobium saman).

66. The rain trees are in better condition this year: the dryer state of the air and soil, which has obtained since September, appears to have benefited the trees. A small supply of seed is now obtained yearly from the largest trees.

67. The statement below gives details of the trees in the Exotic Plantation :—

Names of kinds.	Number alive last year.	Number alive this year.	Remarks.
Antidesma dallachyanum ...	3	3	Slow growth ; Queensland Cherry.
Aleurites molluccana	None	None	To be planted as soon as trees are available.
Arabian date-palms ...	3	1	Two dead.
Broussonetia papyrifera ...	1	4	Three young trees planted ; healthy.
Casuarina tenuissima	4	4	Healthy ; doing well.
Ceratonia siliqua	7	7	Healthy ; growth slow.
Eucalyptus rostrata	30	19	Some doing well ; others indifferently.
Ditto cerbra	15	45	Thirty young trees planted to fill blanks.
Ditto tereticornis ...	48	49	One added ; healthy ; growth slow.
Ficus triemani	2	5	Three new trees planted ; doing well.
Garcinia Roxburghii	6	6	Healthy ; bearing fruit ; growth slow.
Maclura aurantiaca	4	4	Doing well.
Manihot glaziovii	...	4	Not very promising.
Pterocarpus marsupium ...	4	4	Two large and healthy ; two are poor specimens.
Pithecolobium saman	19	19	Trees are more healthy this year.
Swietenia macrophylla	2	6	Four planted ; all healthy.
Tecoma serratifolia	...	4	Healthy.

68. The allotment for the year was Rs. 100, of which Rs. 99-14-4 were spent, leaving a saving of one anna eight pies. Receipts amounted to Rs. 53, which amount was paid in to the President of the District Board.

Date Plantation.

Date and Eucaly plantation (*Phœnix dc lifera* and *Eucaly citriodora*).

69. There has been a loss of 100 in the number of date trees previously planted, and as the young trees on hand were considered too small and weak to plant out, no blanks were filled up this year. The number of trees now planted out and living is 700.

70. A few look healthy and are growing slowly ; but the majority are not doing well, as previously explained : this is chiefly due to the shade caused by the Eucalyptus trees among which they are planted.

71. The Eucalyptus trees are in a fairly satisfactory condition, and give promise of developing into useful building poles in time.

72. The strip of vacant ground bordering the public road on the east side was planted up during the year. The soil in several places is heavy and hard, and on these spots the young trees have died out in large numbers. The result of this year's planting is 5,000 young trees added to the plantation.

73. There is a small blank on the west side planted some years ago, on which only a few trees survive : this has been trenched and a stock of seedlings is being raised to replant it this year. When this is done, the planting will be completed, so far as eucalyptus trees are concerned ; the available area will then be filled up : all that will remain to be done will be to fill up the blanks among the date-palms.

74. The allotment for the year was Rs. 400, of which Rs. 399-15-7 were spent.

75. Receipts amounted to Rs. 2, which was paid in to the President of the District Board.

V.—Financial Results.

76. The estimated expenditure for the Horticultural Garden for the year was Rs. 15,900, and the actual expenditure amounted to Rs. 15,858-4-8, leaving a saving of Rs. 41-11-4.

77. The total estimated receipts were Rs. 13,500, and the total actual receipts were Rs. 12,898-5-3, or Rs. 601-10-9 below the estimate, and Rs. 151-9-9 less than last year.

78. The receipts from sale of garden produce, as detailed in Appendix I, amounted to Rs. 12,275-6-7, or Rs. 336-9-5 less than were estimated, and Rs. 123-10-11 below the amount realized last year from the same source.

79. By adding to the total actual receipts the value of the plants, &c., sent out free of charge, the total year's revenue for garden produce amounts to Rs. 12,813-1-7.

scribers. 80. There was a decrease of two in the number of each class of subscribers, the number of each class was—

First class	7
Second do.	13

tive apprentices. 81. There have been two changes in the *personnel* of the apprentice establishment during the year: one was appointed to a private garden in Lucknow, and the other left the Garden voluntarily. There is no lack of candidates, so the vacancies were at once filled up. I regret I cannot say the boys who come forward are of the stamp required: that there are plenty of openings for trained gardeners is proved by the number of applications which are constantly being received for competent men. Twenty applications were received during the year.

ropean apprentices. 82. The boy who was entertained in 1892 is still in the Garden; he has evinced better interest in his work this year: still I am far from satisfied with the progress he has made.

wer show. 83. The annual Flower Show was again held in the Wingfield Park, and, in spite of a very unfavourable season for nearly all kinds of garden produce, was very fairly successful in nearly all sections.

84. There was a slight falling off in the number of exhibits, which were 635 against 697, a decrease of 62 on the preceding year.

85. There was not quite such a large attendance of visitors as there has been at previous shows: disagreeable weather on the show day may have been the cause of this falling off.

86. Details are as follows:—

Sections.	Last year number of collections.	This year number of collections.
I.—Public gardens: foliage and flowering pot plants	10	17
Ditto cut flowers	17	10
II.—Private gardens: foliage and flowering pot plants	114	102
Ditto cut flowers	81	61
III.—Private gardens: vegetables	297	244
IV.—Public and jail gardens: vegetables	108	135
V.—Fruits (open to all)	41	38
Ladies' prizes	29	28
Total ...	697	635

87. The show accounts stand as below:—

Receipts.

	Rs.	a.	p.
Balance from last year	379	14	6
Contributed by European gentlemen	299	0	0
Ditto native ditto	75	0	0
Ditto Lucknow Municipality	50	0	0
Ditto Husainabad Endowment	50	0	0
Ditto Dilkhusha Garden	7	0	0
Sale of tickets	169	4	0
Total ...	1,030	2	6

Expenditure.

	Rs.	a.	p.
Distributed in prizes	489	0	0
Printing schedules and advertising	38	10	0
Construction and repairs to show stands	22	15	9
Miscellaneous	99	10	3
Balance with Deputy Commissioner	379	14	6
Total ...	1,030	2	6

88. The several buildings in the Garden are all in fair order, and only petty repairs were carried out during the year. Buildings.

89. The main road is breaking up and needs re-metalling, which I hope to carry out during the coming rains.

90. Another tank was constructed for storing water for watering pot plants.

91. The weather experienced in the beginning of the year and during the rainy seasons was not unfavourable to garden operations generally, but the early cessation of the monsoon rains and the entire absence of rain from September to the present time has brought about a state of atmospheric dryness which has been most inimical to vegetation generally. The ground, too, is in a state of extreme dryness, and the prolonged absence of rain is telling most severely on the garden and its contents. Season.

92. Detailed in the following list are the contribu tions and names of the contributors to the garden during the year :—

From J. Bourke, Esq., Oudh and Rohilkhand Railway, Seohara—

One plant of a seedling Canna with large flowers.
One lot of carnation plants.

From the Assistant Director, Department of Land Records and Agriculture, North-Western Provinces and Oudh—

Two consignments of roots of the Rum plant *(Strobilanthes flaccidifolius)*.
Two pounds of clover seed.

From the Director, Botanical Garden, Jamacia—

One packet of seed of Nelumbium luteum.

From Dr. Bonavia, London—

One large packet of seed of an Egyptian onion.

From the Director, Botanical Department, Northern India—

One packet of seed of *Strobilanthes sp.* from the Nilgiris.

From George Reid, Esq., Naini Tal—

Six packets of seeds of jungle climbers and sweet peas
Four plants of Fuchsias of kinds.
Fifty-four plants of Geraniums of six kinds.
Two plants of *Primula sinensis*.

From E. A. Mumford, Esq., Lucknow—

One packet of seed of Cathartocarpus Roxburghii.

From A. H. Pirie, Esq., Lucknow—

Seven packets of seeds of new and choice flowering annuals.

From the Superintendent, Royal Botanical Garden, Calcutta—

5½lbs. of palm seeds of three kinds.
¼lb. of mahogany seed.
Eleven ornamental and rare plants.

From the Superintendent, State Gardens, Gwalior—

A collection of choice, rare and ornamental plants, numbering 58 plants.
One packet of seed of *Cochlospermum gossypium*.

From the Superintendent, Botanical Garden, Bangalore—

Two packets of tree seeds.

From the Superintendent, Khushru Bágh, Allahabad—

Cuttings of three kinds of named roses.

From the Secretary to Government, North-Western Provinces and Oudh—

Two packets of seeds, unnamed, from C. W. Carnegy, Esq., Mexico.

From the Superintendent, Botanical Garden, Saháranpur—

A collection of new and ornamental plants, numbering 30.
Eighteen fruit-trees comprising named kinds of plums and loquats.
Nineteen packets of flower seeds of choice kinds; a bundle of rose cuttings of seven named kinds.

From the Secretary, Agricultural and Horticultural Society of India, Calcutta—

Three packets of seeds of ornamental trees.
Thirty-two rose cuttings of 16 named kinds.

From the Superintendent, Agricultural and Horticultural Society, Madras—

Two packets of palm seeds, two kinds.
One packet of melon seed.
Six packets of seeds of ornamental trees and climbers.

From the Superintendent, State Gardens, Morvi, Káthiawár—

Fifty-eight plants of trees, rare and ornamental plants.
Two packets of seed of *Anogeisus pendula*.

From the Superintendent, Government Gardens, Nágpur—

One packet of seed of *Ipomœa sidæfolia*.

From the Superintendent, Government Agricultural and Horticultural Garden, Lahore—

Five mango trees of three choice kinds.
Twenty-one plants of rare and ornamental plants.
A bundle of rose cuttings of named kinds.
A large number of chrysanthemum plants, comprising 162 named kinds.

From Messrs. Reasoner Brothers, Oneco, Florida—

One packet of seed of *Melia azedarachta* var. *umbra culiformis*.
One packet of seed of *Ipomœa michauxi*.

From Sawak Máli, Pachmarhi—

Sixty-five plants of *Phaius wallachii*.
One packet of seed of a large *toryee* (*Luffa Ægyptica*, var.).

From the Head Mâli, Government House, Naini Tal—

A bundle of willow cuttings.
A bundle of *Aloysia citriodora* cuttings.
Three and a-half seers of seed of *Chamærops fortunii*.

93. The following were purchased :—

From E. Benary, Esq., Erfurt, Germany—

2,310 seeds of 25 kinds of choice palms.
71lbs. 10ozs. of vegetable seeds of kinds.
540 packets of flower seeds.

From Messrs. Vilmorin, Andrieux & Co., Paris—

50 seeds of *Areca alba*.
200 seeds of *Thrinax elegans*.

From Messrs. Sutton and Sons, Reading, England—

92 packets of vegetable seeds, 30lbs.

From Messrs. Landreth and Sons, Philadelphia—

30 collections of vegetable seeds of 32 kinds each.
50 collections of vegetable seeds of 22 kinds each.
193½lbs. of vegetable seeds of kinds.

94. The following seeds were supplied from the Gardens free of charge :—

To the Superintendent, Government Botanical Garden, Saháranpur—

One maund *Inga dulcis* seeds.
Seven kinds of sugarcane cuttings, two of each.

To the Superintendent, Royal Botanical Garden, Calcutta—

Four packets of sweet pea seeds.

One packet of *Eucalyptus citriodora.*

One packet of *Rumex hymenocephalus.*

To the Secretary, Agricultural and Horticultural Society of India, Calcutta—

One packet of *Butea frondosa.*

To the Superintendent, Agricultural and Horticultural Society's Garden, Madras—

½lb. *Phœnix rupicola.*

To J. Beck, Esq., Superintendent, State Gardens, Morvi—

½lb. *Phœnix rupicola.*

Eight packets of country vegetable seeds.

Two packets of tree seeds.

To the Superintendent, Government Agricultural and Horticultural Garden, Lahore—

One packet seed of *Mimusops elengii.*

To Mr. R. Rose, Cawnpore—

Seventeen packets of acclimatized flower seeds.

Three packets of imported flower seeds.

To the Director, Royal Botanical Garden, Kew—

1lb. seed of *Phœnix rupicola.*

M. RIDLEY,

Superintendent, Government Horticultural Gardens, Lucknow.

APPENDIX I.

Statement showing the Receipts and Expenditure of the Horticultural Gardens, Lucknow, for the year ending 31st March 1896.

Receipts.	Actuals of 1894-95.	Sanctioned estimate of 1895-96.	Actuals of 1895-96.	Expenditure.	Actuals of 1894-95.	Sanctioned estimate of 1895-96.	Actuals of 1895-96.
	Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.	Rs. a. p.
Interest on Government notes	121 3 3	108 0 0	94 4 2	Superintendent	3,000 0 0	3,000 0 0	3,233 8 8
Rent of land	205 10 3	300 0 0	240 10 6	Exchange compensation allowance	499 1 9	629 0 0	537 14 0
Subscriptions	324 0 0	480 0 0	288 0 0	Clerks	535 0 0	540 0 0	557 4 8
				Servants	71 13 0	72 0 0	71 0 0
Total ...	650 13 6	888 0 0	622 14 8	Gardeners and assistants	2,795 9 9	3,090 0 0	3,014 2 3
				School for Native Gardeners	888 15 11	1,000 0 0	971 5 1
Sales.				Variable labour	1,218 4 9	1,000 0 0	999 15 4
				Travelling allowance	...	70 0 0	240 9 0
Fruit trees	672 9 0	...	976 2 0	Purchase of seeds and plants	3,667 5 9	2,900 0 0	2,917 6 8
Vegetable and flower seeds (acclimatized)... ...	1,605 1 3	...	1,765 11 6	Ditto livestock	60 0 0	300 0 0	140 0 0
Ditto (imported) ...	1,873 1 0	...	1,467 6 3	Feed of livestock	1,400 0 0	1,600 0 0	1,582 8 9
Ornamental trees and plants	4,763 8 0	...	4,767 12 0	Purchase of manure	168 8 0	75 0 0	25 0 0
Vegetables	137 12 3	...	311 15 6	Maintenance of premises	585 11 11	400 0 0	366 1 0
Cut flowers	865 13 6	...	665 10 0	Postage charges	147 0 0	150 0 0	150 0 0
Fruit...	972 1 6	...	883 3 0	Telegram ditto	3 14 0	5 0 0	4 9 0
Wood and grass	87 0 0	...	59 2 0	Purchase and repairs of tools, &c.	608 11 2	800 0 0	794 4 3
Miscellaneous	1,422 3 0	...	1,378 8 10	Petty contingencies	200 0 0	269 0 0	252 10 0
Total ...	12,399 1 6	12,612 0 0	12,275 6 7				
GRAND TOTAL ...	13,049 15 0	13,500 0 0	12,898 5 3	Total ...	15,800 0 0	15,900 0 0	15,858 4 8

M. RIDLEY,

Superintendent, Government Horticultural Gardens, Lucknow.

C.—Distribution.

43. The demand for acclimatised and imported flower seeds was nearly the same as last year. The amount realized by sale of acclimatised flower seeds amounted to Rs. 944-4-0, against Rs. 961-10-0 last year. The figures for imported flower seeds are Rs. 80-6-0, against Rs. 75 last year.

44. With regard to the distribution of ornamental trees, shrubs, bulbs, &c., as shown in Appendix II, there is a very substantial increase in the total number sent out this year as compared with last.

45. This must be regarded as highly satisfactory when the very unfavourable character of the season for planting of any kind is taken into consideration. There can, I think, be no doubt but that planting, particularly in the case of trees and shrubs, was largely restricted owing to the light and uncertain character of the rainfall in the monsoon period, which is the time usually most favourable for planting operations and the season usually selected for work of this kind. With a more favourable season, I have no doubt, a still greater advance would have been made upon the results now recorded.

46. In the issue of seeds, there is a slight falling off in the number of packets sent out, but the total weight is greater than last year, due principally to the sale of a large quantity of *Inga dulcis* seed.

47. The approximate value of the plants, cuttings, bulbs, cut flowers, &c., issued free of charge amounts to Rs. 566-11. This added to the value of the fruit trees distributed free of charge makes the total value of the year's free distribution to be Rs. 599-15-0.

IV.—Arboriculture.

48. The demand for Eucalyptus leaves was nearly double the quantity ordered last year, being for this year 61¾ maunds against 37 maunds last year. **Supply of Eucalyptus leaves.**

49. The very light fall of rain during the usual monsoon period was greatly against tree-planting, and considerably increased the difficulties incidental to raising young stock. In spite, however, of the absence of the usual rainfall so favourable to all arboricultural work, there is a considerable increase in the number of trees distributed this year as compared with last, but after all the issue is comparatively small for a large district like Lucknow. **Arboricultural nursery.**

50. Attention was given to raising young stock of all the kinds of trees found to be in request, the number raised being largest of seedling mangoes and jaman which are most in demand.

51. Propagation is kept down to as near the number of each kind likely to be required as possible. After all, this is mere guess work, and every year a surplus results of several kinds, which owing to becoming too large to transplant have to be cut down; most of those enumerated in column 5 of the stock statement as missing were overgrown stock.

52. It will be observed that the stock on hand at the close of the year is considerably greater than the one we had at the beginning: this affords ground for thinking that the supply of trees will be ample for all probable demands for the current year.

53. In a year of scarcity like this, it seems to me that attention may again be drawn to the value of *Inga dulcis* as an auxiliary food supplier. It is perhaps not too well known yet that the trees yield an abundent crop of seed pods, which contain a quantity of a white nut-kernal-like substance *(arillus)* which is sweet and very palatable, and I believe also nutritive. ***Inga dulcis.***

54. The pods are now ripe (May), and underneath each tree and by every hedge of Inga can be seen a collection of adults and children eagerly in search of the pods as they fall.

The tree is perfectly hardy over most parts of India; is easily raised and, being evergreen, adds much to the general landscape effect.

55. From what I know of it, I consider it deserves to be as widely disseminated and as largely grown as possible. District Boards might encourage its growth by using it on waste odd corners where nothing is grown, and on all roads, lines and boundaries where shade and shelter are desirable, or where space for a tree exists.

56. It would be well, I think, to call the attention of District Officers and all Government officials to the value and usefulness of this tree, and the desirability of promoting its growth as extensively as possible.

57. The space in the nursery not used or required for young trees was cropped with barley which has done fairly well.

58. The following statement gives in detail the trees raised, sent out, and in stock for the year:—

Name of trees.	Total in nursery on 31st March 1896.	Raised during the year.	Total.	Distributed during 1896-97.	Missing.	Total in nursery on 31st March 1897.
	1	2	3	4	5	6
Amb	3,000	5,600	8,600	2,670	...	5,930
Ambili	476	140	616	88	48	480
Mahua	40	40	80	7	3	70
Gular	340	115	455	20	...	435
Gabh	30	...	30	...	...	30
Jaman	700	170	870	45	5	820
Pakar	130	160	290	45	35	210
Peepal	150	130	280	5	...	275
Bargad	60	110	170	6	4	160
Bel	145	70	215	24	...	191
Shahtut	300	...	300	6	14	280
Seesham	155	28	183	...	...	183
Momseri	180	40	220	6	4	210
Kath-Jaman	320	140	460	5	...	455
Chilwal	70	...	70	51	...	19
Bignonia	70	...	70	...	...	70
Sirsa	60	...	60	...	...	60
Barhal	80	30	110	18	10	82
Bauhinia	100	...	100	...	10	90
Babul	52	...	52	...	...	52
Bijaisar	80	...	80	...	3	77
Nim	50	170	220	7	1	212
Ficus retusa	205	...	205	52	5	148
Kemkohar...	18	...	18	...	...	18
Mahogany...	230	30	260	...	...	260
Maclurea	30	...	30	...	...	30
Garcoinia	10	...	10	...	...	10
Khirni	50	...	50	2	...	48
Kaitha	50	...	50	1	...	49
Divi-Divi	200	...	200	...	...	200
Rain tree	150	...	150	...	...	150
Amaltas	75	...	75	4	1	70
Kanji	30	...	30	...	...	30
Kathal	...	28	28	...	...	28
Total	7,636	7,001	14,637	3,062	143	11,432

59. The grant for the year was first Rs. 800 which was subsequently increased by Rs. 138, making the total allotment for the year Rs. 938; of this Rs. 931 were spent leaving a saving of Rs. 7.

60. The receipts in the arboricultural nursery were Rs. 484-15, which amount was duly paid in to the President of the District Board.

Exotic Plantation.

61. No additions were made this year to the trees under observation in the Exotic Plantation.

62. The season was very unfavourable and all the kinds under trial felt the lack of the usual monsoon moisture, and have not made much progress in consequence.

63. It was decided to reduce the area planted with Divi-Divi by the removal of all the stunted and sickly trees. The experiment is now confined to three rows of the best trees on the westside of the plot; they number 51, and all look healthy. Divi-Divi (*Cæsalpinia coriaria*).

64. The following statement gives details of the trees in the Exotic Plantation at the close of the year, with notes on their condition:—

Names of kinds.	Number alive last year.	Number alive this year.	Remarks.
Antidesma Dallachyanum ...	3	3	Slow growth; healthy.
Aleurites molluccana	None	None	Plants not yet available.
Arabian date palms	1	1	Not doing well.
Broussonetia papyrifera ...	4	4	Healthy; poor growth.
Casuarina tenuissima	4	4	Healthy, doing fairly well.
Ceratonia siliqua	7	6	One dead, rest healthy; not much growth.
Eucalyptus rostrata	19	19	A few thriving, rest not doing well.
Ditto cerbra	45	40	Five dead; little progress.
Ditto tereticornis ...	49	47	Two dead; moderate growth only.
Ficus Triemani	5	5	Doing well.
Garcinia Roxburghii	6	6	Healthy; grow very slowly.
Maclura aurantiaca	4	4	Doing well.
Manihot glaziovii	4	2	Two dead and the other two sickly.
Pterocarpus marsupium ...	4	4	Two fine trees and two bad specimens.
Pithecolobium saman	19	20	Two small, 18 large and healthy.
Swietenia macrophylla ...	6	6	All doing fairly well.
Tecoma serratifolia	4	4	Healthy; little growth.

65. The allotment for the year was Rs. 100, of which Rs. 93-13-8 was spent.

66. Nothing was sold out of the Exotic Plantation during the year owing to the drought, consequently there were no receipts.

Date Plantation.

67. With every other place, the Date Plantation suffered from the want of the usual rainfall. On some of the highest points the effects of this want of adequate moisture are evident on a few of the older Eucalyptus trees; a few have died, and others have lost their leaders, but the total number of casualties is small, and I hope with normal rainfall in the coming year there will be a return to the good growth of previous years. *Eucalyptus citriodora.*

68. The work of the year was principally in watering and tending the small trees of previous years, planting, and filling up blanks in the latest planted ones.

69. A small plot on the west side was replanted with young seedlings. The year's planting has added 3,000 young trees to the plantation: another plot requires to be treated in the same way, and I hope to be able to deal with it in the coming rainy season.

70. No date palms were planted out during the year, but a stock of young plants is being grown in pots to fill up blanks when the plants are large enough to plant out. Date palms (*Phœnix actylifera*),

71. The allotment for maintenance for the year was Rs. 400, out of which Rs. 396 was spent leaving a saving of Rs. 4.

72. Receipts amounted to Rs. 30-8, which were paid into the President, District Board.

V.—Financial Results.

73. The estimated expenditure for the Horticultural Garden for the year was Rs. 16,000 and the actual expenditure amounted to Rs. 16,697-13-1, or Rs. 697-13-1 more than the estimate.

74. One item of this was the increase of pay granted to the Superintendent, but not entered in the estimate when submitted, also to charges incurred for *locum tenens* during the Superintendent's absence on three months' privilege leave.

75. The estimated receipts for the year were Rs. 13,500 and the actual receipts amounted to Rs. 13,135-0-8, or Rs. 364-15-4 below the estimate. The year's revenue is, however, better than last year by Rs. 236-11-5.

76. The receipts from sale of graden produce, as detailed in Appendix I, amounted to Rs. 12,410 (cash Rs. 12,316-10 and credit Rs. 93-6), or Rs. 202 less than the estimate and Rs. 134-9-5 more than was realized from the same source last year.

77. By adding to the total actual receipts for garden produce the value of the plants, &c., issued free of charge, the total year's revenue from garden produce amounts to Rs. 13,009-15-0.

Subscribers.

78. There was a decrease of one in the number of second class subscribers during the year. The number of each class was:—

First class	7
Second class	12

Native apprentices.

79. There have been few changes in the apprentice staff. One was appointed to take charge of the Reformatory School Garden at Bareilly and another was transferred to the Wingfield Park establishment. The two vacancies thus caused were at once filled up, so that the full number of 16 is at present entertained.

80. The period of training has now been fixed at five years.

81. That employment exists for trained gardeners is shown by the receipt of 19 applications for such during the year.

European or Eurasian apprentices.

82. The single Eurasian apprentice entertained completed his period of training on the first of March last. He has, however, for reasons separately stated by me, been allowed to remain in the garden another year.

I am glad to say he has greatly improved, and by taking a keener interest in his work and studies gives promise of becoming an efficient gardener.

Flower show.

83. The annual flower show was held as in previous years in the Wingfield Park. In spite of a dry and unfavourable season, it is satisfactory to be able to record a larger and generally better show in all sections except fruit, as compared with previous years.

84. Not only was there a larger number of exhibits, but quality and development were in many instances superior and an advance upon previous years' exhibits of the same kind. The number of exhibits were 714 against 635 last year.

85. It is to be regretted that there was a considerable falling off in the number of visitors from the European part of the community, but the show attracted a greater number than usual of native visitors.

86. The following statements give details of the number of exhibits, receipts, and expenditure:—

Sections.	Last year's number of collections.	This year's number of collections.
I.—Public gardens: foliage and flowering pot plants	17	18
Ditto cut flowers	10	17
II.—Private gardens: foliage and flowering pot plants	102	130
Ditto cut flowers	61	99
III.—Private gardens: vegetables	244	268
IV.—Public and jail gardens: vegetables	135	140
V.—Fruits (open to all)	38	27
Ladies prizes	28	15
Total ...	635	714

Receipts.

	Rs.	a.	p.
Balance from last year	379	14	6
Contributed by European gentlemen	385	0	0
Ditto by native ditto	77	0	0
Ditto by Lucknow Municipality	50	0	0
Ditto by Hussainabad Endowment	50	0	0
Realized by sale of tickets	150	0	0
Total ...	1,091	14	6

Expenditure.

	Rs.	a.	p.
Distributed in prizes	482	0	0
Printing schedules and advertising	37	7	0
Construction and repairs to show stands	73	12	0
Miscellaneous	103	5	9
Balance with Deputy Commissioner	395	5	9
Total ...	1,091	14	6

87. The weather before and at the beginning of the period under report, was, so far as my memory goes, the dryest ever experiened. The excessively dry state of soil and air had the worst effects on vegetation generally; even large trees and shrubs felt and suffered greatly in the hot weather. Upon this followed, as is only too well known, a scanty and irregular rainfall in the usual monsoon period. The garden and garden work suffered extensively by the absence of the usual moisture at this time, and with the aid of which in normal years so much important garden work is usually carried out. Weather.

In brief, the major part of the work and operations carried out by the garden were most severely handicapped by the unfavourable weather which was experienced during almost the whole of the year.

88. The following is a list of contributors and their contributions to the garden during the year:—

From J. Beck, Esqr., Superintendent, State Gardens, Morvi, Kathiawar—

Four packets of seeds of two ornamental trees.
Thirteen packets ditto ditto
Thirteen kinds of choice conifers.
One packet of seed of *Asparagus plumosus nama.*

From O. Bartels, Esq., Brisbane—

One packet of seeds of *Kentia belmoreana.*
One packet of seeds of *Kentia* Canterbury *ana.*
Twenty plants of *Dendrobium Phalœnopsis.*

From the Curator, Botanical Garden, Ootacamund—

Seeds of nutmeg (*Myristica Fragrans*).

From Messrs. Couper, Allen, & Co., Cawnpore—

One packet of seed of a wattle.

From the Deputy Conservator of Forests, Naini Tal—

Two packets of seeds of two species of maple.

From the Director, Royal Botanical Garden, Kew—

One packet of seed of Seradilla (*Ornethopus Gativus*).
One packet of seeds of Palm (*Psendopheonix Sargentii*).
Five packets of seeds of fruit and ornamental trees.

From the Director, Botanical Garden, Jamacia—

One packet of seeds of Hibiscus elatus.

From R. A. Fairlie, Esq., Allahabad—

One packet of seed of a distinct variety of African marigold.

From Charles Hoskins, Esq., Lucknow—

Two packets of seeds of two fruit trees.
Two ditto ditto of *Ipomœa* and *convolvulus*.

From F. E. G. Matthews, Esq., Naini Tal—

Two packet of seeds of *Wistaria Gineusis*.

From George Reid, Esq., Naini Tal—

Fifty-eight plants of choice double Petunias in 9 varieties.
Two ditto of *Primula chinensis*.
One ditto *Fuchsia*.

Five packet of seeds of trees and country vegetables.

From the Superintendent, Royal Botanical Garden, Calcutta—

Fifty seeds of the *Doum Palm* (*Hyphæne thebaica*).
Two lbs of mahogany seed (*Swietenia mahogani*).
Two packets of seeds of *Oreodxa regia*.
Two packets of tree seeds.

From the Superintendent, Government Gardens, Allahabad—

One packet of seed of *Ipomœa bona nux*.

From the Superintendent, Government Agricultural Horticultural Gardens, Lahore—

Sixty-seven plants of choice named chrysanthemums.
Four plants of named roses.
Four plants of new shrubs and plants.
Eight orange and lime trees of three kinds.
A bundle of rose cuttings of three named kinds.

From the Agicultural Horticultural Society's Gardens, Madras—

One packet of seeds of *Cochlospermum gossypium*.
½lb seed of the best variety of Egyptian cotton.
Twenty seeds of *Corypha umbraculifera*.

From the Superintendent, Botanical Gardens, Saháranpur—

A collection of ornamental trees and shrubs and plants, numbering 61 plants.
Thirty plants of fruit trees of kinds.
A bundle of willow cuttings.
A bundle of rose cuttings, four kinds.
Twelve packets of seeds of timber and ornamental trees.
Four ozs. of seeds of *Pinus longifolia*.
Twelve equal of seeds of six varieties of *Cow Pea*.

From the Superintendent, Botanical Garden, Bangalore—

Two fruits of *Sechium edule*.

From the Superintendent, State Gardens, Gwalior—

A collection of choice and rare plants, comprising ferns, &c., numbering 27.
Four plants of a sprouting perennial cabbage.

From the Superintendent, State Gardens, Baroda—

Two-hundred and fifty seeds of *Livistona chiuensis*.

From Munshi Sheo Narain, Rai Bahadur, Agra—

One large packet of seeds of Tenda (*Citrullus vulgaris varfistulosus*).

From the Head Mali, Government House, Naini Tal—

One bundle of cuttings of sweet scented verbena (*Aloysia citriodora*).

From Messrs. Reasoner Brothers, Oneco, Florida—

Twelve packets of seeds of eleven kinds of choice palms and cycads
Nine packets of seeds of ornamental trees, shrubs. and climbers.

89. By purchase—

From E. Benary, Esq., Erfurt, Germany—

2,290 seeds of palms compirsing 23 distinct genera and species.
75 lbs of vegetable seeds of kinds.
54 packets of seeds of flowering annuals of kinds,
536 Pictorial packets of flower seeds.

From A. Lietze, Esq., Rio de Janeiro—

A collection of 50 choice named *Caladiums.*

From Messrs. Vilmorin, Andrieux, & Co., Paris, France—

600 seeds of palms comprising eight distinct genera and species.
One packet of seed of strawberry Belle de meaux.

From Messrs. Sutton and Sons, Reading, England—

92 packets of vegetable seeds of kinds, 26¼ lbs.

From Messrs. Landreth and Sons, Philadelphia—

40 collections of vegetable seeds of 22 kinds each.
25 collections of vegetable seeds of 32 kinds each.
165 lbs of vegetable seeds of kinds.

90. The following seeds were supplied from the Gardens free of charge : —

To the Superintendent, Botanical Garden, Saháranpur—

Eight packets of flower and tree seeds.

Two lbs sweet peas.

One packet *Oreodœa regia.*

One pod of *Beaumontia grandiflora.*

To the Superintendent, Government Agricultural Horticultural Garden, Lahore—

Ten packets of flower and tree seeds, &c.,

24 seeds of *Borassus flabelliformis.*

To the Superintendent, Memorial Garden, Cawnpore—

One packet of *Eucalyptus citriodora* seed.

To the Secretary, Agricultural Horticultural Society's Garden, Calcutta—

One packet of *Eucalyptus citriodora.*

To A. Parsons, Esq., Simla—

One packet of *Ipomœa rubro cœrulea.*

To J. Beck, Esq., Superintendent, State Gardens, Morvi, Kathiawar—

Three packets of seeds of ornamental trees.

Two lbs of *Phœnix* Gylvestri's seed.

To Messrs. Cooper, Allen & Co., Cawnpore—

One packet of canaigre seed.

To the Superintendent, Agricultural Horticultural Society's Garden, Madras—

Eight ozs. of Muckkan Geim seed.

To C. Maries, Esq., Superintendent, State Garden, Gwalior—

Nine packets of tree seeds.

Three packets of flower seeds.

To Count Schwerin, Germany—

Two packets acer seeds two kinds, eight ozs.

To Dr. Bonavia, London—

Three packets of Baingan seeds.

To the Director, Department of Land Records and Agriculture, North-Western Provinces and Oudh—

Five lbs of seed of *Bixa orellana.*
Two lbs entire pods of Do.
Two lbs bark of Do.
Botancial specimens of Do.
Two bundles dried stems of Sola Pith (*Æschynomene aspera*).
Five lbs of bark of *Ailanthus excelsa.*

M. RIDLEY,

Superintendent, Government Horticultural Gardens.

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APPENDIX I.

Statement showing the Receipts and Expenditure of the Horticultural Gardens, Lucknow, for the year ending 31st March 1897.

Receipts.	Actuals of 1895—96.	Sanctioned estimate of 1896—97.	Actuals of 1896—97.	Expenditure.	Actuals of 1895—96.	Sanctioned estimate of 1896—97.	Actuals of 1896—97.
	Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.	Rs. a. p.
Interest on Government notes	94 4 2	108 0 0	94 4 2	Superintendent	3,233 8 8	3,000 0 0	3,347 10 8
Rent of land	240 10 6	300 0 0	306 12 6	Exchange compensation allowance	537 14 0	497 0 0	462 1 0
Subscriptions	288 0 0	480 0 0	324 0 0	Gardeners and assistants	3,014 2 3	3,090 0 0	3,044 13 3
				Clerks	557 6 8	780 0 0	717 0 0
Total ...	622 14 8	888 0 0	725 0 8	Servants	71 0 0	72 0 0	72 0 0
				School for native gardeners	971 5 1	1,050 0 0	994 1 8
				Travelling allowance	240 9 0	230 0 0	563 8 6
				Coolie labor	999 15 4	1,000 0 0	971 4 6
Sales.				Purchase of seeds and plants	2,917 6 8	2,900 0 0	3,360 2 0
				Ditto of live stock	140 0 0	300 0 0	150 0 0
ON CASH PAYMENT.				Feed of Ditto	1,582 8 9	1,500 0 0	1,392 7 9
				Purchase of manure	25 0 0	75 0 0	...
Fruit trees	976 2 0	...	803 6 0	Maintenance of premises	366 1 0	300 0 0	118 8 10
Vegetable and flower seeds (acclimatised) ...	1,765 11 0	...	1,556 13 6	Postage charges	150 0 0	150 0 0	151 0 0
Ditto ditto (imported) ...	1,467 6 3	...	1,514 2 0	Telegrams	4 9 0	5 0 0	3 8 0
Ornamental trees and plants	4,767 12 0	...	5,079 1 0	Purchase and repairs of tools &c., ...	794 4 3	800 0 0	817 11 0
Vegetables	311 15 6	...	201 2 9	Petty contingencies	252 10 0	251 0 0	287 10 3
Cut flowers	665 10 0	...	701 13 9	Famine allowance	...	...	244 5 8
Fruit	883 3 0	...	295 0 0				
Wood and grass	59 2 0	...	30 6 0				
Miscellaneous	1,378 8 10	...	2,134 13 0				
Total ...	12,275 6 7	12,612 0 0	12,316 10 0				
CREDIT ACCOUNTS.							
Fruit trees	...	...	70 0 0				
Miscellaneous	...	...	23 6 0				
Total ...	...	...	93 6 0				
TOTAL RECEIPTS IN CASH AND CREDIT ...	12,898 5 3	13,500 0 0	13,135 0 8	Total ...	15,858 4 8	16,000 0 0	16,697 13 1

M. RIDLEY,

Superintendent, Government Horticultural Gardens, Lucknow.

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Hemendra Kothari
on 24 February, 2020

APPENDIX II.

Abstract of Distribution List.

Name of Departments, &c., supplied.	Plants.									Total.						
	Fruit.		Strawberries.	Ornamental and timber trees		Ornamental trees and shrubs.		Bulbs and tubers.	Total.	Vegetable.	Flower.	Fruit.	Trees and shrubs.	Miscellaneous.	Total.	
	Plants.	Cuttings.		Plants.	Cuttings.	Plants.	Cuttings.								Number of packets.	Weight.
																lbs. ozs.
Arboriculture	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
General public	1,562	...	7,950	702	...	7,010	340	3,777	21 341	2,782	4,091	...	126	21	7,020	698—3
Government and public gardens in India	1,311	...	2,300	752	...	3,809	165	1,203	9,540	503	1,055	...	33	3	1,594	679—14
Government and public in other countries	4	...	...	...	...	...	...	...	4	3	...	...	2	...	5	0—9½
Jails	540	...	...	...	...	...	...	...	540	36	29	..	...	...	65	10—14
Total ...	3,417	...	10,250	1,454	...	10,819	505	4,980	31,425	3,324	5,175	...	161	24	8,684	1,389—8½

M. RIDLEY,

Superintendent, Government Horticultural Gardens, Lucknow.